1858MNRAS..19...54H

Note on the Variable Star numbered 83 *in the Greenwich Catalogue of* 1576 *Stars for* 1850, *whose Variability was discovered by Mr. Hind.* By the Astronomer Royal.

This star was discovered to be variable by Mr. Hind on the 4th of November, 1850, as announced in Vol. XI., No. 2, of the *Monthly Notices* (page 46). He there calls it a fiery-looking star of the seventh magnitude, and states that it was not noticed by Lalande or Bessel, and does not occur in the excellent map of that region recently published by the Berlin Academy. It was observed first at Greenwich on Nov. 8 of the same year, and noted as of the 6.7th magnitude; on Nov. 14, 28, and 29, it was estimated of the 8th magnitude; and on Dec. 5, 7, and 12, of the 8.9th magnitude. Its colour on Nov. 14 was noted as pale white, and its appearance disk-like; on Nov. 28 the colour was again noted to be white; but on Nov. 29 and Dec. 12 it was slightly red. It was not observed again at Greenwich until the year 1854, and was then estimated to be of the 11th magnitude; since which time it has been repeatedly looked for without being observed. Till the present year this may have arisen from other small stars near it having been observed instead; but this year it has been particularly looked for with an exact knowledge of its place, particularly by Mr. Dunkin on Dec. 2, when the night was remarkably clear, who thus became assured of its total invisibility.

Observations of Comet V., 1858 (*Donati's*), *taken with the Equatoreal of the Liverpool Observatory.* By J. Hartnup, Esq.

1858.	G.M.T.	Comet's R.A.	Log $\frac{p}{P}$	Comet's N.P.D.	Log $\frac{q}{P}$
	h m s	h m s		° ′ ″	
Sept. 12	7 18 29·8	11 10 24·04	+8·665	53 54 50·7	−9·8859
	7 33 30·0	26·65	8·653	48·0	9·8978
	7 48 31·0	28·97	8·638	42·3	9·9089
15	7 26 36·5	11 22 22·16	8·660	53 37 12·6	9·8915
	7 46 37·9	26·16	8·643	8·4	9·9066
	8 6 39·3	30·06	8·621	3·9	9·9210
18	7 31 5·0	11 36 39·89	8·659	53 33 10·6	9·8929
	7 43 6·4	42·53	8·649	14·3	9·9021
	7 55 7·5	45·29	8·637	18·7	9·9110
21	7 7 28·1	11 53 48·49	8·677	53 52 9·9	9·8698
	7 30 30·4	54·69	8·662	19·0	9·8890
	7 53 33·6	11 54 0·89	8·642	28·1	9·9066

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1858MNRAS..19...54H

1858.	G.M.T. h m s	Comet's R.A. h m s	Log $\frac{p}{P}$	Comet's N.P.D. ° ′ ″	Log $\frac{q}{P}$
Sept. 24	6 33 23·9	12 14 30·93	8·686	54 47 39·3	9·8344
	6 48 26·4	35·59	8·683	57·4	9·8484
	7 3 29·2	40·35	8·678	54 48 15·2	9·8618
25	6 42 22·1	12 22 25·54	8·683	55 18 7·4	9·8413
	6 52 23·9	28·68	8·680	20·4	9·8505
	7 2 26·2	32·20	8·677	35·2	9·8594
27	6 52 48·4	12 39 46·50	8·675	56 42 17·4	9·8482
30	6 9 35·2	13 9 19·04	8·658	60 1 17·9	9·8108
	6 24 39·9	25·73	8·660	2 11·2	9·8236
	6 39 44·2	32·22	8·662	3 6·5	9·8363
Oct. 4	5 52 49·7	13 55 19·09	8·605	67 38 18·2	9·8186
	6 12 58·4	29·42	8·618	40 22·5	9·8316
	6 33 4·6	39·43	8·627	42 24·1	9·8439
8	6 15 7·2	14 45 26·07	8·570	79 25 17·2	9·8703
	6 55 24·4	47·54	8·595	30 52·6	9·8806
13	6 30 53·8	15 44 53·96	8·543	96 54 16·5	9·9184
	6 46 0·2	45 0·97	8·558	56 24·9	9·9163
15	5 59 52·1	16 5 40·80	+8·493	103 16 6·5	−9·9379

1858.	Star of Comparison.	1858.	Star of Comparison.
Sept. 12	B.A.C. 3811	Sept. 27	12 Can. Ven.
15	3965	30	B.A.C. 4390
18	3998	Oct. 4	Arcturus
21	4128	8	B.A.C. 4853
24	4128	13	5306
25	4233	15	5720

The observations are corrected for refraction. The corrections to be applied for parallax in time and arc, are represented by *p* and *q*, P is the equatoreal horizontal parallax. The following are the assumed mean places of the stars of comparison for

1858, Jan. 0.

	R.A. h m s	N.P.D. ° ′ ″	Authority.
B.A.C. 3811	11 1 30·37	52 55 14·00	British Association Catalogue
3965	11 33 33·92	54 59 51·26	....
3998	11 42 18·63	54 16 45·57	....
4128	12 9 21·81	56 8 44·56	....
4233	12 26 37·93	55 58 4·20	....
12 Can. Ven.	12 49 22·68	50 54 50·04	Nautical Almanac 1858
B.A.C. 4390	13 0 21·84	61 36 42·55	British Association Catalogue
Arcturus	14 9 11·09	70 4 35·57	Nautical Almanae 1858
B.A.C. 4853	14 34 54·62	77 43 27·64	British Association Catalogue
5306	15 53 8·17	98 0 20·49	....
5720	16 53 9·76	103 20 22·78	....

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1858MNRAS..19...56S

The observations were for the most part taken before the close of daylight, at which time, the tail and coma not being visible, the nucleus was well defined and suitable for accurate determination of its position. Later in the evening I was frequently disturbed by visitors, but through the kind assistance of my friend Mr. J. T. Towson, the following measures of the nucleus, coma and tail were obtained at about 20ʰ, Liverpool sidereal time, each evening.

Date.	Diameter of Nucleus.	Diameter of First Envelope.	Diameter of Second Envelope.	Distance from Centre of Nucleus to Front of Coma.	Diameter of Coma at Right Angles to Tail Measured through Centre of Nucleus.	Length of Tail Measured along the Curve on the Convex Side.	Distance from Nucleus to End of Tail in a Straight Line.	Greatest Diameter of the Tail.
1858.	″	′ ″	′ ″	′ ″	′ ″	° ′	° ′	° ′
Sept. 30	17	2 1		1 26	5 46	26 35	26 0	3 10
Oct. 4	20	1 40		1 32	4 28	34 20	31 30	6 0
8	22	1 52	5 37	3 36	8 46	39 30	35 0	7 30
11	23	1 54	5 43	4 19	10 39	..	..	..

Decided dark spots were seen in the coma near the nucleus; one on the 8th and two on the 11th of October. The tail was curved towards the north, and broadest at or near the end. It was more luminous and better defined on the convex than on the concave side, and a dark band passed from the nucleus through the centre to the extreme end of the tail. On the 30th September a well-defined conical shadow was visible, the length of which, measured from the nucleus or the base of the cone to the apex, was 18′. The length of this shadow on the 4th October was 21′, but the contrast between it and the dark band in the centre of the tail was much less striking than it was on the 30th September. On the 8th October it was rendered invisible by the increased darkness of the band which passed through the centre of the tail. The tail of the comet was more symmetrical and the envelope was brighter and better defined on the 30th September than on any other occasion.

On the Advantages to be derived from the Use of Silver Mirrors for Reflecting Telescopes, and on a Novel Method of Mounting such Instruments. By Dr. Steinheil.

(*Translation of a Letter from Dr. C. A. Steinheil of Munich, to Professor C. A. F. Peters of Altona, published in No.* 1138 *of the Astronomische Nachrichten*).

"What mainly induces me to address this communication to you is a wish to make you acquainted with the result of my